AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Method for obtaining and expanding postembryonic hematopoietic stem cells from umbilical cord blood while avoiding wanted differentiation, wherein initial cells from umbilical cord blood are cultivated *ex vivo* in a stroma-free medium and in the presence of a regio-modified glycan and/or glycosaminoglycan, which is modified as follows:

the side group of the C2 atom of one or more monomer units of the glycan and/or glycosaminoglycan has an acetyl or acyl group with 2 to 12 carbon atoms; the side group of the C6 atom of one or more monomer units of the glycan and/or glycosaminoglycan is a 6-O-sulfate group, and

obtaining generated stem cells and progenitor cells that can differentiate specifically into myeloid and lymphatic cells.

2. (Original) Method according to claim 1, wherein the region-modified glycan or glycosaminoglycan is selected from α1-4 glycans, ß1-3 glycans, ß1-4 glycans, ß1-3, ß1-4 glycosaminoglycans, ß1-4, α1-4 glycosaminoglycans, ß1-4, ß1-3, (α1-3) glycosaminoglycans and ß1-4, ß1-3, (α1-4) glycosaminoglycans.

3. (Currently Amended) Method according to claim 1 ~~or 2~~, wherein the region-modified glycosaminoglycan is a heparin derivative that was substantially N-desulfated and N-reacetylated or N-reacylated on the C2 atom, that has C6-O-sulfate groups, and that contains 5 percent or less C3-O-sulfate.

4. (Original) Method according to claim 3, wherein the regio-modified glycosaminoglycan is a heparin containing at least 60% C2-O-sulfate and at least 80%, C6-O-sulfate.

5. (Currently Amended) Method according to claim 1 ~~one of the claims 1 to 4~~, wherein the region-modified glycan or glycosaminoglycan is present with a concentration of 15 to 50 mg/L in the medium.

6. (Currently Amended) Method according to claim 1 ~~one of the claims 1 to 5~~, wherein the properties of the stem cells are monitored in an ML-IC assay.

7. (Currently Amended) Method according to claim 1 ~~one of the claims 1 to 6~~, wherein the properties of the generated progenitor cells are monitored in an LY-IC assay (lymphatic) or in a LTC-IC assay (myeloid-erythroid) or in both assays.

8. (Currently Amended) Method according to claim 1 ~~one of the claims 1 to 7~~, wherein the stem and progenitor cells propagated under conditions conforming to GMP (good manufacturing practice) are differentiated into functional lymphocytes (NK cells and NKT cells).

9. (Currently Amended) Therapeutic composition, containing stem and progenitor cells obtained according to claim 1 ~~one of the claims 1 to 8~~.

10. (Original) Therapeutic composition according to claim 9 and a pharmaceutically acceptable carrier or excipient.

11. (Original) Culture medium for expanding postembryonic stem and progenitor cells, characterized in that it contains a region-modified glycan and/or glycosaminoglycan, wherein the side group of the C2 atom of one or more monomer units of the glycan and/or glycosaminoglycan is acylated or acetylated, and wherein the side group of the C6 atom of one or more monomer units of the glycan and/or glycosaminoglycan is a 6-O-sulfate group.

12. (Original) Use of regio-modified glycans and glycosaminoglycans for expanding postembryonic stem and progenitor cells, wherein the side group of the C2 atom of one or more monomer units of the glycan and/or glycosaminoglycan is acylated or acetylated, and wherein the side group of the C6 atom of one or more monomer units of the glycan and/or glycosaminoglycan has a 6-O-sulfate group.

13. (Currently Amended) Method according to claim 1 ~~one of the claims 1 to 10~~ for the production of a therapeutic agent for the direct administration of expanded stem and progenitor cells.

14. (Original) Method according to claim 13 for producing a therapeutic agent for the treatment of tumorous diseases, viral diseases, hepatitis C, HIV, malignant system diseases, acute leukaemias, chronic leukaemias, myeloproliferative syndrome (MPS), myelodysplastic syndrome (MDS), high-grade malignant non-Hodgkin lymphomas (NHL), low-grade malignant NHLs, Hodgkin's disease, multiple myeloma, Waldenström's syndrome, histiocytosis X, amyloidosis and solid tumors such as anal carcinoma, astrocystoma, basalimoa, pancreatic cancer, bladder cancer, bronchial carcinoma, breast cancer, corpus carcinoma, CUP syndrome, intestinal cancer, small intestines tumors, ovarian cancer, endometrial carcinoma, gall-bladder cancer, uterine cancer, cervico-uterine cancer, glioblastoma, brain tumors, brain lymphomas, metastases of the brain, testicular cancer, hypophyseal tumor, carcinoids, laryngeal cancer, bone cancer, head and neck tumors, colon carcinoma, craniopharyngeomas, liver cancer, metastases of the liver, eyelid tumor, lung cancer, stomach cancer, medulloblastomas, melanoma, meningeomas, mycosis fungoides, neurinoma, kidney cancer, non-Hodgkin lymphomas, oligodendroglioma, oesophageal, carcinoma, ovarial carcinoma, pancreatic carcinoma, penis cancer, prostate cancer, throat cancer, rectal carcinoma, retinoblastoma, vaginal cancer, thyroid carcinoma, oesophageal cancer, spinalioma, thymoma, urethral cancer, vulvar cancer, soft-tissue tumors, cervical carcinoma.